

## Chapter 3: Results from Test Administrations through Spring 2005

### *Introduction*

The legislation establishing the CAHSEE called for the first operational forms of the exam to be administered in spring 2001 to 9<sup>th</sup> graders in the Class of 2004. At the first administration 9<sup>th</sup> graders could volunteer, but were not required, to take both portions of the exam. Students who did not pass the exam in that administration were required to take the exam as 10<sup>th</sup> graders in spring 2002. Preliminary results from the CAHSEE spring 2001 and 2002 administrations were reported in the Year 2 and Year 3 evaluation reports (Wise et al., June 2001; Wise et al., June 2002b). Results from the 2001 administration were reported more fully in the first of the biennial evaluation reports to the Legislature, the Governor, the Board, and the CDE (Wise et al., Jan. 2002a).

The CAHSEE was administered six more times from July 2002 through May 2003 to students in the Class of 2004 who had not yet passed one or both parts. In addition, students from the Class of 2005 were required to take the CAHSEE for the first time as 10<sup>th</sup> graders in March or May of 2003. Analyses of results from these administrations were reported in the Year 4 evaluation report (Wise, et al., Sep. 2003) and in the second biennial evaluation report (Wise et al., 2004).

Subsequent to the 2003 administrations, the requirement to pass the CAHSEE was deferred to the Class of 2006. In 2004, the CAHSEE was modified slightly and restarted with administration to all 10<sup>th</sup> graders in the Class of 2006. Results from the 2004 administrations were reported in the Year 5 evaluation report (Wise, et al., Sep. 2004). The analyses of the 2004–05 administrations included both 10<sup>th</sup> graders in the Class of 2007 taking the CAHSEE for the first time and 11<sup>th</sup> graders in the Class of 2006 who had not passed the CAHSEE as 10<sup>th</sup> graders. The 11<sup>th</sup> graders took the CAHSEE one or more times in September 2004, November 2004, February 2005, March 2005, and May 2005. The 10<sup>th</sup> graders participated in the February, March or May 2005 administrations. In addition, a small number of adult education students took the CAHSEE during the 2004–05 school year. Results from the 2004–05 administrations were reported in the 2005 CAHSEE Evaluation Report (Wise, et al., 2005). All of these reports are available on the CDE Web site. (See <http://www.cde.ca.gov/ta/tg/hs/evaluations.asp>).

In our 2006 Biennial Report, we focus on results from the most recent administrations and provide comparisons to results from earlier administrations. Analyses of results from the 2004–05 CAHSEE administrations are organized around two main questions:

1. How did this year's results for 10<sup>th</sup> graders in the Class of 2007 compare to results for the Classes of 2005 and 2006 when those students took the CAHSEE for the first time as 10<sup>th</sup> graders in 2003 and 2004 respectively?

2. How has performance improved for 11<sup>th</sup> graders in the Class of 2006 who had not yet passed the CAHSEE and what can we expect for those who have not yet passed by the end of 11<sup>th</sup> grade?

As in prior years, some difficulties were encountered with the data available for these analyses. Students taking the CAHSEE for the first time were sometimes unable to take both parts in the same administration and so have separate, albeit incomplete, records from two different administrations. In addition, a few students appear to have used two different answer sheets in the same administration, again generating separate incomplete records. CAHSEE test result records do not yet contain a constant and unambiguous student identifier. Records from each school had to be matched by name and birth date and, in some cases, by district-level student identifiers. Inconsistencies or omissions in coding these fields complicated the process of linking separate records for the same student. Failures in linking such records may have led to an overestimate of the total number of different students tested.

For the 11<sup>th</sup> graders, linking problems were even more complicated. First, they may have taken each portion of the CAHSEE two, or in some cases, three times during the 2004–05 school year. Second, many districts appeared to have changed student identifiers between the 2003–04 and 2004–05 school years. In addition, many students changed schools between years while others were still considered 10<sup>th</sup> graders and thus grouped with the first-time test takers. Accurate linking for the 11<sup>th</sup> graders is essential to answering questions such as “How many students in the Class of 2006 who did not pass last year are still taking the CAHSEE?” and “Where did students who appear to have taken the CAHSEE for the first time as 11<sup>th</sup> graders come from?”

### ***Who Tested?***

Tables 3.1 and 3.2 show the number of test records from each of the five CAHSEE administrations during the 2004–05 school year. Separate counts are shown by grade and for students taking the regular administration of the test, those taking it with accommodations, and those taking it with modifications. Results are shown for 4,526 administrations to adult education students, 42.4 percent of whom passed the ELA test and 36.5 percent of whom passed the mathematics test. Adult education students were eliminated from further analyses, which focused on the 10<sup>th</sup> and 11<sup>th</sup> graders.

In all, California school districts processed 468,443 administrations of the ELA test and 481,000 administrations of the mathematics test to 10<sup>th</sup> graders. There were 240,254 administrations of the CAHSEE to 11<sup>th</sup> graders. Not surprisingly, the 11<sup>th</sup> graders, nearly all of whom had low scores on their initial attempt(s) to pass the CAHSEE as 10<sup>th</sup> graders, passed the tests at much lower rates than did 10<sup>th</sup> graders taking it for the first time. For the ELA test, a total of 8,919 administrations to 10<sup>th</sup> graders and 9,997 administrations to 11<sup>th</sup> graders included accommodations. An additional 891 administrations to 10<sup>th</sup> graders and 1,497 administrations to 11<sup>th</sup> graders involved modifications that invalidated the scores. In most cases this involved oral

presentation of reading test questions. For the mathematics test, there were 6,249 accommodated test administrations for 10<sup>th</sup> graders and 6,820 for 11<sup>th</sup> graders. An additional 5,130 administrations to 10<sup>th</sup> graders and 8,115 administrations to 11<sup>th</sup> graders involved modifications, most commonly the use of calculators. Passing rates for administrations involving accommodations or modifications were generally quite low.

**Table 3.1. Number of Students Taking the CAHSEE ELA Test in 2004–05 by Administration Type and Date**

Administration	Administration Date:						
Type	Statistic	Sep. 04	Nov. 04	Feb. 05	Mar. 05	May 05	Total
10th Grade Students							
Regular	N	NA	NA	134,161	306,653	12,301	453,115
	% Pass	NA	NA	75.9%	78.8%	49.9%	77.1%
Accommodation	N	NA	NA	2,405	5,253	184	7,842
	% Pass	NA	NA	26.7%	30.4%	23.4%	29.1%
Modification	N	NA	NA	828	1,219	76	2,123
	% > 349	NA	NA	27.5%	20.7%	21.1%	23.4%
Not Tested*	N	NA	NA	4,328	8,875	4,717	17,920
TOTAL	N	NA	NA	141,722	322,000	17,278	481,000
	% Pass	NA	NA	72.5%	75.6%	35.9%	73.2%
11th Grade Students							
Regular	N	10,299	81,365	13,007	41,150	20,985	166,806
	% Pass	32.6%	39.3%	43.2%	32.2%	29.6%	36.2%
Accommodation	N	444	4,575	617	1,903	1,085	8,624
	% Pass	11.3%	17.3%	20.1%	14.4%	14.7%	16.2%
Modification	N	23	835	180	1,017	406	2,461
	% > 349	34.8%	19.0%	24.4%	17.5%	18.2%	18.8%
Not Tested*	N	3,863	29,590	4,402	15,928	8,580	62,363
TOTAL	N	14,629	116,365	18,206	59,998	31,056	240,254
	% Pass	23.3%	28.3%	31.8%	22.8%	20.8%	25.9%
Adult Education Students							
Regular	N	48	1,209	440	1,314	623	3,634
	% Pass	37.5%	55.0%	55.7%	49.2%	48.6%	51.7%
Accommodation	N	0	0	0	2	4	6
	% Pass	0	0	0	0.0%	0.0%	0.0%
Modification	N	0	0	0	0	0	0
	% > 349	0	0	0	0	0	0
Not Tested*	N	7	223	89	312	155	786
TOTAL	N	55	1,432	529	1,628	782	4,426
	% Pass	32.7%	46.4%	46.3%	39.7%	38.8%	42.4%

\*Note. Students who took only the mathematics test are shown as "Not Tested" in this table.

**Table 3.2. Number of Students Taking the CAHSEE Mathematics Test in 2004–05 by Administration Type and Date**

Administration		Administration Date:					
Type	Statistic	Sep. 04	Nov. 04	Feb. 05	Mar. 05	May 05	Total
<i>10th Grade Students</i>							
Regular	N	NA	NA	133,794	305,837	12,303	451,934
	% Pass	NA	NA	71.4%	77.2%	46.1%	74.6%
Accommodation	N	NA	NA	1,818	4,283	170	6,271
	% Pass	NA	NA	22.2%	27.6%	21.2%	25.8%
Modification	N	NA	NA	1,884	3,123	149	5,156
	% > 349	NA	NA	23.2%	22.7%	14.8%	22.6%
Not Tested*	N	NA	NA	4,226	8,757	4,656	17,639
TOTAL	N	NA	NA	141,722	322,000	17,278	481,000
	% Pass	NA	NA	68.0%	73.9%	33.1	70.7%
<i>11th Grade Students</i>							
Regular	N	11,131	84,302	12,933	40,902	20,743	170,011
	% Pass	37.3%	40.0%	35.1%	29.7%	26.0%	35.3%
Accommodation	N	343	3,190	604	1,705	962	6,804
	% Pass	10.5%	14.8%	13.6%	15.1%	11.3%	14.1%
Modification	N	225	3,738	558	2,376	1,245	8,142
	% > 349	13.8%	18.6%	18.1%	16.4%	15.8%	17.4%
Not Tested*	N	2,930	25,135	4,111	15,015	8,106	55,297
TOTAL	N	14,629	116,365	18,206	59,998	31,056	240,254
	% Pass	28.9%	30.0%	26.0%	21.3%	18.4%	26.0%
<i>Adult Education Students</i>							
Regular	N	51	1,200	414	1,324	644	3,633
	% Pass	35.3%	50.4%	38.7%	44.1%	38.8%	44.5%
Accommodation	N	0	0	0	3	4	7
	% Pass	0	0	0	0.0%	0.0%	0.0%
Modification	N	0	0	0	0	0	0
	% > 349	0	0	0	0	0	0
Not Tested*	N	4	232	115	301	134	786
TOTAL	N	55	1,432	529	1,628	782	4,426
	% Pass	32.7%	42.2%	30.2%	35.9%	32.0%	36.5%

\*Note. Students who took only the ELA test are shown as "Not Tested" in this table.

As noted above, many students participated in more than one administration so the number of students tested was fewer than the number of answer documents processed. Attempts to count individual students, rather than just answer documents, are described in the next section.

### ***Analysis of the Test Score Data***

A number of potential issues with the data on test scores were addressed before we analyzed the results. First, we took steps to match records for students who participated in more than one testing session. We wanted to remove duplication in counts of the total number of students tested and to be able to estimate the number of students who passed both parts of the CAHSEE. Second, we conducted analyses of the accuracy with which scores on different forms were converted to the common reporting scale (equated) and looked at the consistency with which the essays were scored.

### ***Matching Student Records from Different Administrations***

In response to data analysis requirements in the 2001 federal No Child Left Behind (NCLB) Act, the state legislature passed SB 1453 requiring the establishment of student identifiers for all California public or charter school students. When the statewide student identifiers called for by SB 1453 are fully implemented by the California School Information Services (CSIS), matching records for students participating in different test administrations will be “relatively” easy (CSIS, 2004). Unfortunately CSIS student identifiers were not widely used with the 2004–05 CAHSEE administrations. We thus had to match records on school identifiers and student names and birth dates. In some cases, we were able to achieve matches using identifiers supplied by school districts on a voluntary basis. As usual, there were numerous cases in which student names and birth dates were not coded consistently across different administrations. In addition, the student identifiers supplied by districts were sometimes coded incorrectly or inconsistently.

We matched records in two phases. In the first phase, we matched records for 10<sup>th</sup> graders within and across the February, March, and May administrations and matched records for 11<sup>th</sup> graders within and across all 2004-05 five administrations. In the second phase, we matched the merged records for 11<sup>th</sup> graders from the 2004–05 administrations with records for 10<sup>th</sup> graders in the 2004 administrations who had not passed both parts. We used a process labeled “fuzzy matching” which is described in the 2005 Evaluation Report (Wise, et al., 2005).

Table 3.3 shows the number of matching records found in the first matching phase for 10<sup>th</sup> graders and 11<sup>th</sup> graders. Just over 10,000 10<sup>th</sup> grade students had records from two different administrations. In most cases, these students were making up one of the tests that they missed during the original administration. For 11<sup>th</sup> graders, 72,632 students had records from more than one administration. As intended, these students were taking advantage of being allowed to test twice during the 11<sup>th</sup> grade.

Table 3.4 shows results from matching 2005 records for 11<sup>th</sup> graders to records for 10<sup>th</sup> graders from 2004. Matches were found for 121,331 students who had not completed the CAHSEE requirement in the 10<sup>th</sup> grade. A major finding shown in Table 3.4 was that no matching records were found for over 25 percent (44,978) of the students who had not completed the CAHSEE requirement during the 10<sup>th</sup> grade. A

slightly larger number (46,188) of 11<sup>th</sup> grade students who tested in 2005 could not be matched to 10<sup>th</sup> grade records from 2004. Among the reasons we could not match all of the 11<sup>th</sup> grade records were that: (a) some students transferred in from other states; (b) others may have been 10<sup>th</sup> graders in 2004 who failed to earn enough credits to be classified as 11<sup>th</sup> graders in 2005; and (c) some of these students had not tested as 10<sup>th</sup> graders because they were new English learners or had been otherwise unable to test or had simply been absent on the testing dates.

**Table 3.3. Number of Records Matched Across 2004–05 Administrations**

Match Category	Number of Records
<b>10<sup>th</sup> Graders</b>	
Original number of records	481,000
Matches within administration	79
Matches to earlier administration	10,030
Unique records remaining	470,891
<b>11<sup>th</sup> Graders</b>	
Original number of records	240,254
Matches within administration	103
Matches to earlier administration	72,632
Unique records remaining	167,519

**Table 3.4. Matched and Unmatched Students from the 2004 and 2005 Administrations**

Category	Number of Students	Percent
<b>11<sup>th</sup> Grade Students Matched to 2004 Test-Takers</b>		
Total 11 <sup>th</sup> Graders Tested in 2005	167,519	100%
Total Students Matched	121,331	72%
Total Students Not Matched	46,188	28%
<b>2004 Test-Takers Not Passing One or Both Parts and Not Matched to 2004–05 11<sup>th</sup> Graders</b>		
Total 10 <sup>th</sup> Graders Not Passing in 2004	166,309	100%
Total Students Matched	121,331	73%
Total Students Not Matched	44,978	27%



### Computing Passing Rates

A key issue in computing and reporting passing rates for the CAHSEE is what to use as the denominator. The two main choices are the number of students who took each test and the number of students subject to the CAHSEE requirement. In this report, as in our prior reports, we have opted for the latter, reporting the proportion of all students in the target populations who have passed. However, the number of students in the target populations fluctuates with daily enrollment changes. Table 3.5 compares fall enrollment counts (reported by DataQuest), enrollment counts from the STAR testing that occurred closer in time to the CAHSEE testing dates, and record counts from the CAHSEE. The CAHSEE is now also being used for high school accountability under NCLB requirements. Essentially all students must be tested to meet NCLB participation requirements, so the CAHSEE counts appear to be reasonably complete. Total CAHSEE record counts were used in computing passing rates for this report. STAR reports include the number of students tested in different demographic groups, but do not include separate enrollment counts for these groups. The CAHSEE data provide for consistent counts for each demographic group of interest. Comparative passing rates from the 2003 CAHSEE administrations for the Class of 2005 were recomputed using the same approach. Note that the CAHSEE record counts used here were based on matching records across administrations to avoid counting students more than once. This step requires access to student identifiers. The counts reported here thus provide new information not available to the CDE, since student identifiers are not included on CDE files.

**Table 3.5. Tenth Grade Enrollment Estimates from DataQuest, STAR, and CAHSEE**

Source	2002–03 10 <sup>th</sup> Graders	2003–04 10 <sup>th</sup> Graders	2004–05 10 <sup>th</sup> Graders
Fall Enrollment (Data Quest)	471,648	490,214	497,197
STAR Reported Enrollment	457,181	475,181	481,983
STAR Students Tested	427,454	452,217	462,693
CAHSEE Student Counts*	425,066	459,199	470,891
CAHSEE Counts as Percent of Fall Enrollment	90.1%	93.7%	94.7%
CAHSEE Students Taking the ELA Test	402,594	450,479	461,957
CAHSEE Students Taking the Math Test	414,903	451,138	462,158
CAHSEE Students Taking Both Tests	392,431	442,418	453,224
Percent of Students Taking Both Tests	92.3%	96.3%	96.2%

\*Note. CAHSEE record counts, after merges to remove duplication, were used in computing passing rates.

### ***Equating the 2005 Test Forms***

We examined the test forms used in each of the three 2005 administrations. ETS conducted equating analyses to convert number-correct scores from each form to scale scores that were as comparable as possible. For the February 2005 test forms, we conducted our own independent analyses. We examined item difficulties, item-total correlations, and differential item functioning indices (the extent to which group differences in passing rates for a given question are not consistent with group differences on the other questions). Our results were in close agreement with the operational analyses conducted by ETS.

We also used commercially available software (WINSTEPS) to create raw-to-scale score translations that were equated with the translations used for past forms. ETS uses a proprietary version of the PARSCALE program to conduct these analyses. Notwithstanding differences in the software used, HumRRO and ETS results matched closely. The minimum raw scores for passing and for NCLB proficiency were identical in the two analyses. Our independent checks thus confirmed the accuracy of the equating process used by ETS.

### ***Scoring Consistency***

In past reports, we have examined the accuracy of the scores generated from different parallel forms of the exam. During the Year 5 evaluation, we monitored ETS's analysis of item-level statistics from each administration and found no significant changes from the results for prior forms. More complete information on test accuracy may be found in technical documentation provided by ETS.

We paid particular attention to consistency in the scoring of student essays. In previous years, each student taking the ELA test was required to write two essays, the first involving analysis of an associated text and the second in response to a freestanding prompt that did not involve text processing. Beginning in 2004, the ELA test was shortened and students were required to write only one essay. The type of essay prompt varied across administrations. In the September 2004 and May 2005 administrations, students responded to a stand-alone prompt, while in the November, February, and March administrations, the essay question was associated with a text that also had multiple-choice reading comprehension questions.

As in prior years, each essay was graded by at least two different raters following a four-point rubric that indicated the essay response characteristics required for each score level. Four was the highest score; a score of zero was assigned to responses that were off-topic, illegible, or left blank. Since the scoring rubrics vary from question to question, we monitored the level of agreement between independent raters for each question used with each administration. Table 3.6 shows, for each of the 2004–05 test forms and for test forms from prior years: (a) how often (what percent of the time) there was exact agreement, (b) how often there was a difference of just one score point, and (c) how often there was a difference of more than one score point. Whenever there was



an initial difference of more than one score point, the essay was read again by a third, more experienced reader and the scores assigned by one or both of the initial readers were not used. Thus, all operational scores resulted from two raters who agreed to within a single score point and the average of these two scores was used in computing the student's total score.

This year, we analyzed scoring consistency separately for 10<sup>th</sup> and 11<sup>th</sup> grade students. While the questions and the scoring process were identical for these two groups, the distribution of papers was not. Tenth grade students generated many more essays rated as 3 or 4 in comparison to 11<sup>th</sup> grade students. Since the 2004 administration included only 10<sup>th</sup> grade students, separate analyses of results for 10<sup>th</sup> grade students in 2005 provided a better comparison.

The results indicate that scoring consistency for the 2005 administrations was comparable to or slightly greater than scoring consistency in prior years. There will always be some papers very near the score point boundaries, so we would not expect perfect agreement. The number of serious disagreements in scoring, signified by differences of more than one score point, was generally less than one percent.

**Table 3.6. Rater Scoring Consistency for Student Essays**

Administration	Percent of Essays at Each Level of Agreement					
	1st Essay (Associated Text)			2 <sup>nd</sup> Essay (Stand-alone Prompt)		
	Exact	+/- 1	+/- > 1	Exact	+/- 1	+/- > 1
July 2002	65.2	33.0	1.8	66.2	32.2	1.6
Sep. 2002	68.2	30.7	1.0	69.0	30.0	0.9
Nov. 2002	71.3	27.9	0.8	68.4	30.8	0.8
Jan. 2003	70.6	28.2	1.1	70.3	28.9	0.8
Mar. 2003	64.5	33.6	1.9	62.2	36.2	1.6
May 2003	70.1	29.2	0.7	69.4	29.9	0.7
Feb. 2004				66.3	33.0	0.8
Mar. 2004	62.0	36.6	1.4			
May 2004				68.5	31.5	0.0
Sep. 2004, 11 <sup>th</sup> Grade				71.6	28.0	0.3
Nov. 2004, 11 <sup>th</sup> Grade	67.1	31.6	1.2			
Feb. 2005, 10 <sup>th</sup> Grade	65.8	33.3	0.9			
Feb 2005, 11 <sup>th</sup> Grade	70.7	28.6	0.7			
Mar. 2005, 10 <sup>th</sup> Grade	66.6	32.5	0.9			
Mar. 2005, 11 <sup>th</sup> Grade	73.5	26.0	0.6			
May 2005, 10 <sup>th</sup> Grade				74.0	25.7	0.2
May 2005, 11 <sup>th</sup> Grade				75.4	24.4	0.2
2004–05, 10 <sup>th</sup> Grade	66.5	32.6	0.9			
2004–05 11 <sup>th</sup> Grade	70.3	28.8	0.9			

## ***Who Passed?***

### ***Initial Passing Rates for 10<sup>th</sup> Graders***

A major charge for the independent evaluation was to analyze and report performance on the CAHSEE for all students and for specific demographic groups, including economically disadvantaged students, English learners (EL), and students with disabilities (characterized as “exceptional needs students” in the legislation). Tables 3.7 and 3.8 show the ELA and mathematics passing rates for all 10<sup>th</sup> grade students in the Class of 2007 and also separate passing rates for each key demographic group. Comparisons to 10<sup>th</sup> grade passing rates for the Classes of 2005 and 2006 are also provided.

The passing rates shown in these tables were calculated by dividing the total number of 10<sup>th</sup> grade students who passed each subject in 2005 by the number of students participating in at least one CAHSEE testing session. Prior to 2004, we used fall enrollment data for the denominator, which generally overstates the number of students still in school at the time of CAHSEE testing. Now, because of NCLB requirements, records were entered for all students to allow calculation of participation rates. Thus enrollment counts generated from the CAHSEE data were believed to be an accurate reflection of the number of students in each demographic category. As in last year’s report, the passing rates from the 2003 administration were adjusted for the changes in test difficulty introduced in 2004.

For ELA, initial passing rates have increased modestly but consistently from the Class of 2005 to the Class of 2007 tested in 2005. The overall passing rate for the Class of 2007 was up by about two percentage points from the prior year. Passing rates also increased for nearly all demographic groups.

For mathematics, results for the Class of 2007 were only very slightly higher than for the Class of 2006. Again, students in nearly all categories had higher passing rates than corresponding groups of students in the Classes of 2005.

Passing rates for students receiving special education services continue to be problematic. Only about 30 percent of students receiving special education services passed the ELA or the math test in their initial attempt. If current trends continue, it is likely that a significant number of students receiving special education services will not be eligible to receive a regular diploma.

**Table 3.7. Initial Passing Rates by Demographic Group—English-Language Arts**

Group	Students Tested			Percent Passing		
	Class of 2005	Class of 2006	Class of 2007	Class of 2005*	Class of 2006	Class of 2007
All Students	425,066	459,138	470,891	71.6%	72.9%	74.8%
Females	207,619	224,766	230,425	76.2%	77.4%	79.5%
Males	216,708	233,964	239,214	67.2%	68.7%	70.2%
1. Native American	3,717	4,227	4,270	70.1%	70.9%	70.8%
2. Asian	38,635	42,588	42,699	82.0%	84.1%	85.2%
3. Pacific Islander	2,832	3,107	3,299	69.9%	69.3%	73.5%
4. Filipino	12,475	13,349	13,592	85.3%	86.3%	87.3%
5. Hispanic	169,704	188,494	194,211	57.8%	59.8%	63.2%
6. African American	34,619	37,287	39,501	59.9%	60.1%	62.1%
7. White (not Hispanic)	157,498	165,613	164,927	85.9%	87.0%	88.0%
Economically Disadvantaged (Original Definition)	141,401	162,530	175,446	55.9%	58.4%	62.0%
Economically Disadvantaged (New Definition)	167,869	186,411	197,678	55.7%	58.1%	61.8%
English Learners	72,038	83,728	84,358	34.9%	38.0%	41.3%
Reclassified Fluent English	45,320	49,067	53,323	80.4%	85.2%	87.9%
Special Education Students	36,448	42,516	42,677	32.2%	28.8%	31.5%

\*Note. Passing rates for the Class of 2005 were adjusted to reflect the new scale. The numbers shown here are estimates of the number of students in each category who would have passed had they taken the revised form of the CAHSEE that was first used with the Class of 2006.

**Table 3.8. Initial Passing Rates by Demographic Group—Mathematics**

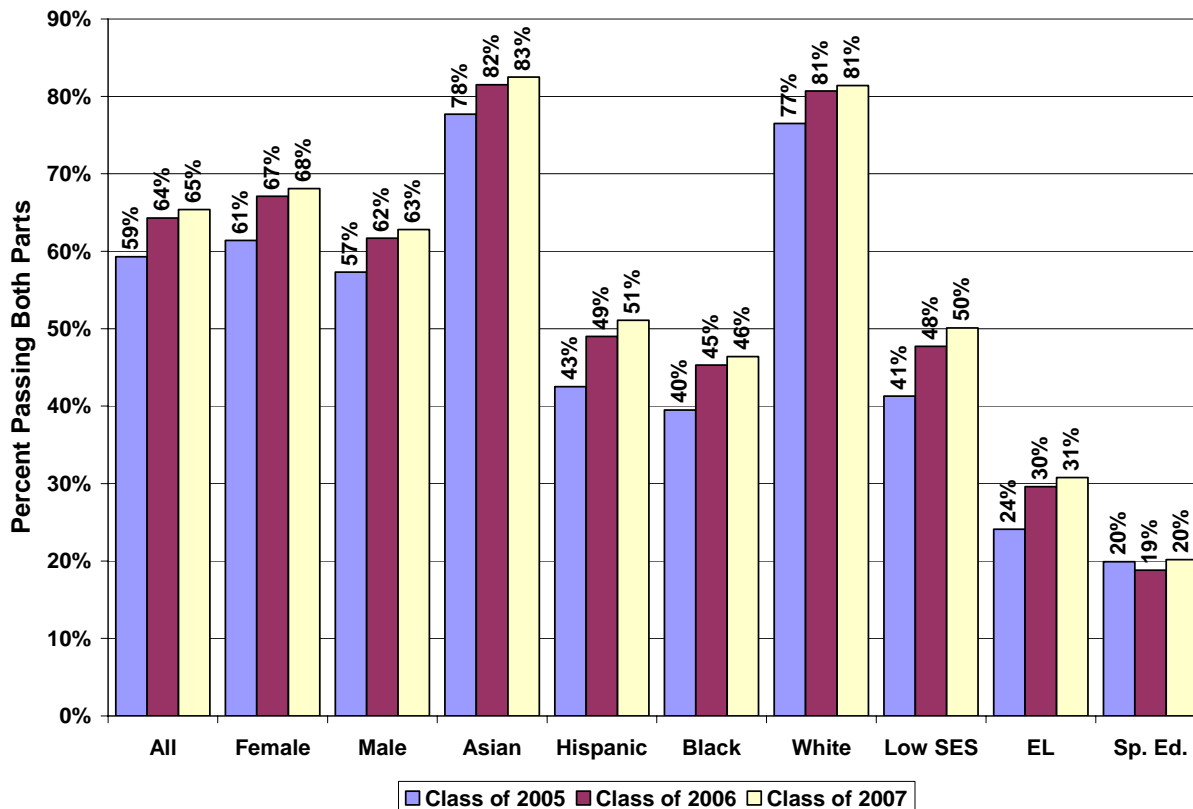
Group	Students Tested			Percent Passing		
	Class of 2005	Class of 2006	Class of 2007	Class of 2005*	Class of 2006	Class of 2007
All Students	425,066	459,138	470,891	66.1%	71.8%	72.1%
Females	207,619	224,766	230,425	66.6%	72.8%	73.1%
Males	216,708	233,964	239,214	65.6%	70.8%	71.3%
1. Native American	3,717	4,227	4,270	62.5%	66.3%	66.3%
2. Asian	38,635	42,588	42,699	86.9%	90.5%	90.9%
3. Pacific Islander	2,832	3,107	3,299	63.3%	69.5%	70.4%
4. Filipino	12,475	13,349	13,592	80.8%	86.0%	85.8%
5. Hispanic	169,704	188,494	194,211	51.1%	59.2%	60.2%
6. African American	34,619	37,287	39,105	44.6%	51.9%	52.5%
7. White (not Hispanic)	157,498	165,613	164,927	81.3%	85.0%	85.4%
Economically Disadvantaged (Original Definition)	141,401	162,530	175,446	51.4%	59.0%	60.2%
Economically Disadvantaged (New Definition)	167,869	186,411	197,678	50.9%	58.6%	59.9
English Learners	72,038	83,728	84,358	39.1%	47.6%	47.0%
Reclassified Fluent English	45,320	49,067	53,323	72.6%	81.9%	83.4%
Special Education Students	36,448	42,516	42,677	26.6%	27.8%	28.6%

\*Note. Passing rates for the Class of 2005 were adjusted to reflect the new scale. The numbers shown here are estimates of the number of students in each category who would have passed had they taken the revised form of the CAHSEE that was first used with the Class of 2006.

Table 3.9 shows the percentages of 10<sup>th</sup> grade students in each demographic group who passed both parts of the CAHSEE in 2005. This information is also displayed graphically in Figure 3.1. Here too, results showed modest gains in comparison to results from 2004 for the Class of 2006. Again, students receiving special education services are having particular difficulty passing the CAHSEE. Roughly 80 percent of the students in this category had not yet passed both parts of the CAHSEE at the end of the 10<sup>th</sup> grade.

**Table 3.9. Percent of 10<sup>th</sup> Grade Students Passing Both Parts of the CAHSEE by Demographic Group**

Group	Students Tested			Percent Passing Both Parts		
	Class of 2005	Class of 2006	Class of 2007	Class of 2005*	Class of 2006	Class of 2007
All Students	425,066	459,138	470,891	59.3%	64.3%	65.4%
Females	207,619	224,766	230,425	61.4%	67.1%	68.1%
Males	216,708	233,964	239,214	57.3%	61.7%	62.8%
1. Native American	3,717	4,227	4,270	55.6%	59.9%	59.6%
2. Asian	38,635	42,588	42,699	77.7%	81.5%	82.5%
3. Pacific Islander	2,832	3,107	3,299	56.0%	60.4%	63.4%
4. Filipino	12,475	13,349	13,592	76.3%	80.8%	81.3%
5. Hispanic	169,704	188,494	194,211	42.5%	49.0%	51.1%
6. African American	34,619	37,287	39,501	39.5%	45.3%	46.4%
7. White (not Hispanic)	157,498	165,613	164,927	76.5%	80.7%	81.4%
Economically Disadvantaged (Original Definition)	141,401	162,530	175,446	41.7%	48.0%	50.4%
Economically Disadvantaged (New Definition)	167,869	186,411	197,678	41.3%	47.7%	50.1%
English Learners	72,038	83,728	84,358	24.1%	29.6%	30.8%
Reclassified Fluent English	45,320	49,067	53,323	66.7%	76.3%	78.6%
Special Education Students	36,448	42,516	42,677	19.9%	18.8%	20.2%



**Figure 3.1. Percent of 10th Grade Students Passing Both Parts of the CAHSEE**

The results by race/ethnicity were confounded to some extent due to interactions of race/ethnicity with other demographic characteristics. In particular, a higher proportion of Hispanic students were in special education, a higher proportion of Black and Hispanic students were economically disadvantaged compared to White students, and a higher proportion of Hispanic students were English learners. We further analyzed test results for the census testing of the Class of 2007 to show separate race/ethnicity results within different types of disadvantages, as shown in Table 3.10. The first three categories include students with a single disadvantage group only, special education, English learner, or economically disadvantaged. The next four categories include various combinations of these conditions and the final category includes students for whom none of these conditions apply.

In general, passing rates are lower for students with more than one disadvantage. Note that Hispanic and particularly African American students have significantly lower passing rates within each specific category.



**Table 3.10. Initial 10<sup>th</sup> Grade Passing Rates by Student Category and Race/Ethnicity**

Student Category	Race / Ethnicity	Class of 2006			Class of 2007		
		Number	Percent Pass ELA	Percent Pass Math	Number	Percent Pass ELA	Percent Pass Math
Students with Disabilities (SD) Students Only	Asian	492	62.4%	63.6%	447	57.7%	61.5%
	Black	2,495	19.7%	15.4%	2,513	24.8%	16.9%
	Hispanic	4,280	31.9%	28.8%	4,170	35.1%	30.8%
	White	11,044	52.4%	49.4%	10,580	55.4%	50.5%
English Learners (EL) Only	Asian	3,490	61.6%	85.7%	3,111	62.1%	86.1%
	Hispanic	10,899	40.3%	45.7%	10,509	43.6%	43.8%
	White	1,037	63.0%	71.8%	995	63.0%	72.4%
Economically Disadvantaged (ED) Only	Asian	8,974	91.8%	93.1%	10,402	92.6%	93.5%
	Black	13,056	61.4%	51.8%	14,539	63.2%	52.3%
	Hispanic	62,033	75.6%	70.4%	66,225	79.0%	72.2%
	White	18,732	80.2%	76.4%	19,959	81.6%	77.2%
SD and EL, (Not ED)	Hispanic	1,663	12.2%	14.2%	1,482	16.4%	15.4%
SD and ED (Not EL)	Black	3,323	13.4%	10.2%	3,536	16.3%	10.9%
	Hispanic	5,817	20.2%	19.9%	5,856	24.1%	21.0%
	White	3,656	29.2%	26.6%	3,733	32.9%	29.4%
EL and ED Only (Not SD)	Asian	6,149	50.1%	75.6%	6,025	52.5%	76.6%
	Hispanic	48,448	38.2%	46.5%	49,779	42.4%	46.3%
	White	1,578	51.5%	69.6%	1,476	56.0%	69.2%
SD, EL, and ED	Asian	512	15.6%	29.5%	533	14.8%	28.3%
	Hispanic	6,677	9.0%	12.1%	7,110	12.4%	13.4%
All Other Students (No Disadvantages)	Asian	22,545	96.8%	97.0%	21,748	97.4%	97.3%
	Black	18,025	73.8%	64.8%	18,497	75.8%	65.7%
	Hispanic	48,631	81.7%	76.2%	49,080	83.1%	76.7%
	White	129,255	93.3%	91.4%	127,941	94.0%	91.7%

Note. Race/ethnicity categories with fewer than 300 students for a particular student category are omitted for that category.

Gaps in passing rates by race/ethnicity were smaller for students who were not disadvantaged than they were when all students in each race/ethnicity category were included. More striking, however, was the extent of race/ethnicity differences among students receiving special education services. Passing rates for the ELA test were twice as high for Asian and White students in this category as they were for Black or Hispanic students. ***For math, the passing rate for students receiving special education services who were White or Asian was more than twice as high as for students receiving special education services who were Hispanic and more than three***

***times as high as the passing rate for students receiving special education services who were Black.***

### ***Analysis of Results for English Learners***

We compared the passing rates for students who were currently English learners and students who were previously English learners but had been reclassified as fluent English proficient (RFEP) as shown in Tables 3.12 and 3.13 above. The results are striking. ELA passing rates for English learners were understandably low, less than 40 percent compared to nearly 73 percent overall. Perhaps because they had to demonstrate language proficiency to be reclassified, students who were no longer English learners passed at higher rates than students in general, 85 percent compared to 73 percent for the Class of 2006. These results were similar to those noted for the Classes of 2005 and 2006.

What may be more surprising is that students who were reclassified as proficient in English also had higher passing rates on the mathematics test compared to students in general, 82 percent versus 72 percent. These results suggest that if English learners achieve fluency, the ELA portion of the CAHSEE should not pose a significant barrier for most of them. In addition, these students do not appear to be disadvantaged on the mathematics test once English proficiency is achieved. We note, however, that relatively few students classified as English learners in 2004 who retested in 2005 were reclassified as having achieved fluency in 2005. Further analysis is needed to determine how more English learners may be helped to reach fluency status.

### ***Analysis of Results by Mathematics Courses Taken***

We analyzed passing rates on the mathematics part of the CAHSEE for students who had completed different levels of math courses. Table 3.11 shows the distribution of the highest level mathematics course completed by students in the Class of 2007 compared to students in the Classes of 2005 and 2006. Table 3.12 shows the percentage of students in key demographic groups who have not yet taken Algebra I (well below expectation) and the percentage who have taken courses beyond Algebra I (expectation). Students following the expected curriculum would be taking at least geometry by the 10<sup>th</sup> grade. Table 3.13 shows the CAHSEE mathematics passing rates for students at each course level. This information is also displayed graphically in Figure 3.2.

**Table 3.11. Distribution of Students by Highest Math Course Taken**

Highest Math Course Taken	Class of 2005		Class of 2006		Class of 2007	
	Number of Students	Percent of Students	Number of Students	Percent of Students	Number of Students	Percent of Students
General Math	12,253	3.0%	11,678	2.6%	9,247	2.0%
Pre-Algebra	47,567	11.5%	50,222	11.1%	48,642	9.9%
Algebra I	111,487	26.9%	121,148	26.9%	114,949	24.4%
Integrated Math I	2,727	0.7%	2,605	0.6%	2,120	0.5%
Integrated Math II	4,806	1.2%	3,986	0.9%	3,224	0.7%
Geometry	123,857	29.8%	135,589	30.1%	123,952	31.0%
Algebra II	72,560	17.5%	83,183	18.4%	87,974	17.9%
Advanced Math	7,757	1.9%	9,986	2.2%	11,795	2.5%
Unknown	31,889	7.7%	32,531	7.2%	47,541	10.1%
All Students	414,903	100.0%	450,928	100.0%	470,891	100.0%

**Table 3.12. Trends in Math Courses Taken by Demographic Group**

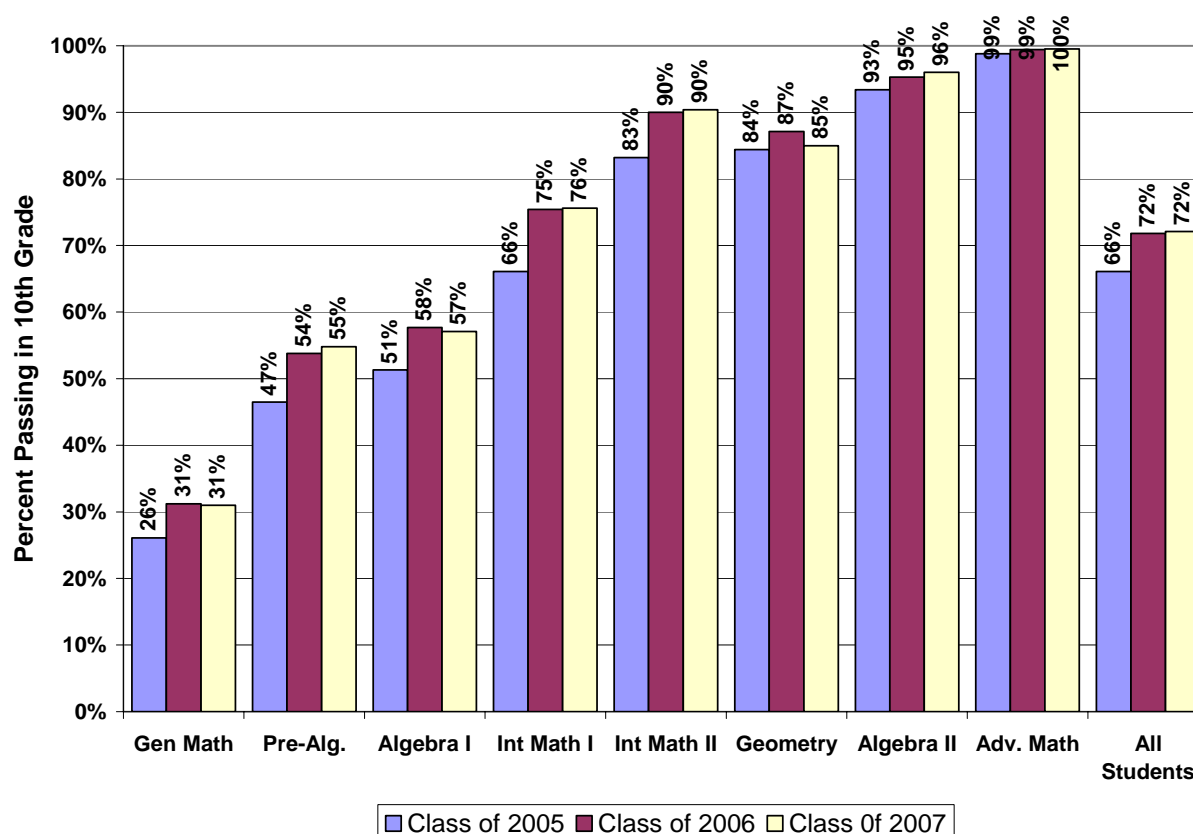
Group	Class of 2005		Class of 2006		Class of 2007	
	% Not Taking Algebra	% Beyond Algebra	% Not Taking Algebra	% Beyond Algebra	% Not Taking Algebra	% Beyond Algebra
All Students	15.6%	54.6%	14.8%	55.6%	13.2%	59.6%
Females	14.2%	57.8%	13.5%	59.1%	12.0%	62.9%
Males	17.0%	51.5%	16.2%	52.2%	14.4%	56.5%
1. Native American	23.5%	42.8%	21.4%	42.9%	20.0%	43.8%
2. Asian	6.9%	78.7%	5.5%	80.6%	4.9%	83.8%
3. Pacific Islander	14.4%	54.6%	14.7%	52.6%	12.9%	56.7%
4. Filipino	8.9%	71.7%	8.3%	72.0%	7.2%	75.6%
5. Hispanic	19.6%	42.0%	18.8%	43.4%	16.2%	49.2%
6. African American	17.9%	48.6%	17.1%	48.6%	15.1%	53.4%
7. White (not Hispanic)	13.5%	62.0%	12.8%	63.1%	11.8%	65.8%
Economically Disadvantaged (Original Definition)	18.9%	44.4%	18.1%	45.8%	15.4%	52.1%
Economically Disadvantaged (New Definition)	19.5%	43.4%	18.6%	44.9%	15.9%	51.1%
English Learners	21.5%	33.8%	20.3%	36.8%	17.4%	42.8%
Reclassified Fluent English	11.1%	65.1%	10.2%	66.9%	8.6%	71.7%
Special Education Students	37.3%	19.5%	34.6%	19.0%	29.6%	24.3%

Note. Students whose highest mathematics course was unknown were excluded from this table.

**Table 3.13. Initial Mathematics Passing Rates by Class and Highest Math Course Taken**

Highest Math Course Taken	Class of 2005*	Class of 2006	Class of 2007
General Math	26.1%	31.2%	31.0%
Pre-Algebra	46.5%	53.8%	54.8%
Algebra I	51.3%	57.7%	57.1%
Integrated Math I	66.1%	75.4%	75.6%
Integrated Math II	83.2%	90.0%	90.4%
Geometry	84.4%	87.1%	85.0%
Algebra II	93.4%	95.3%	96.0%
Advanced Math	98.8%	99.4%	99.5%
Unknown	39.2%	50.0%	41.2%
All Students	66.1%	71.8%	72.1%

\*Note. Passing rates for students in the Class of 2005 were adjusted to reflect estimated rates for the new score scale.

**Figure 3.2. Percent Passing Mathematics by Highest Math Course Taken**

As shown in Table 3.12, the Class of 2007 through 10<sup>th</sup> grade had taken slightly higher levels of mathematics compared with the Classes of 2005 and 2006. The percentage of students who had not yet taken Algebra I dropped from 14.8 percent to

13.1 percent and the percentage of students taking mathematics courses beyond algebra in the 10<sup>th</sup> grade rose from 55.6 percent to 59.6 percent. Note, however, that a much larger proportion of students receiving special education services had not yet taken algebra.

At each course level, the passing rate for the Class of 2007 was essentially the same as the rate for the Class of 2006. As in past years, the differences across course levels are dramatic. Only 31 percent of students who had taken only General Math passed the CAHSEE mathematics test compared to 57 percent of students who had taken algebra, 85 percent of students who had taken geometry, and 96 percent of students who had taken Algebra II.

### ***Improvement for 11<sup>th</sup> Graders Who Retested***

Roughly one-third of the students in the Class of 2006 did not pass both parts of the CAHSEE in the 10<sup>th</sup> grade. During the 2004–05 school year, these students had one or more chances to take the CAHSEE again. We analyzed their retest results to assess the degree to which they had made progress in mastering the skills tested by the CAHSEE. We sought to determine how many had now passed the CAHSEE and, for those who had still not passed both parts, the extent to which they were getting closer to passing. These analyses are particularly important since the Class of 2006 is the first that is required to pass the CAHSEE. Assessing their progress through 11<sup>th</sup> grade will allow some assessment of how many students might eventually be denied a diploma because they have not passed the CAHSEE.

We began by looking at how close to passing these students were in the 10<sup>th</sup> grade. Table 3.14 shows the average ELA and mathematics scores for Class of 2006 students in different demographic groups who took, but did not pass the CAHSEE in the 10<sup>th</sup> grade. In addition to the average scale score, we also computed the percentage of students who were within 20 points of the minimum passing score of 350. Prior data for the Class of 2004 indicated average growth of about 10 points between 10<sup>th</sup> and 11<sup>th</sup> grade. Twenty points thus represents two years of improvement at approximately 10 points per year.

**Table 3.14. Average Scores for Students Who Tested in 2004 But Did Not Pass**

Group	ELA			Mathematics		
	Number	2004 Average	Percent 330 – 349	Number	2004 Average	Percent 330 – 349
All Students	115,622	324.0	46.8%	121,464	330.4	59.2%
Females	46,895	326.2	51.3%	57,539	331.9	63.5%
Males	68,519	322.6	43.8%	63,712	329.1	55.3%
2. Asian	6,551	325.7	50.7%	3,802	332.7	66.6%
5. Hispanic	71,007	323.3	44.9%	72,745	330.4	58.9%
6. African American	13,712	322.6	43.7%	16,863	328.1	52.2%
7. White (not Hispanic)	19,371	326.8	53.7%	22,660	331.7	63.9%
Economically Disadvantaged	73,166	323.0	44.1%	72,752	329.8	57.2%
English Learners	49,940	321.5	40.1%	42,024	329.5	55.9%
Special Education Students	29,043	316.3	29.4%	29,279	323.4	38.0%

For ELA, students who did not pass in 2004 averaged about 25 points below the passing level; slightly fewer than half were within 20 points of passing. For mathematics, the average score was only 20 points below the passing levels and roughly 60 percent were within 20 points of passing.

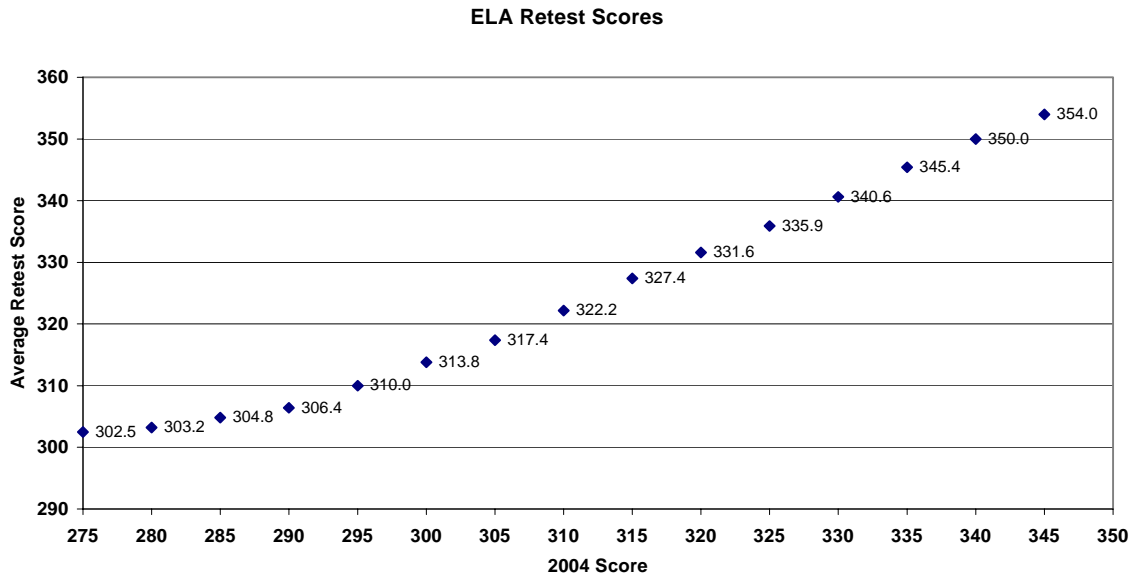
### ***Gain Scores***

For students who retested in 2005, we compared their scores as 11<sup>th</sup> graders, using their first attempt if they tested more than once, to their scores from 2004. Figures 3.3 and 3.4 show the average retest scores for students at different 2004 score levels. In these analyses, we grouped the 2004 scores in 5-point intervals and computed the average 2005 score for students in each of these intervals.

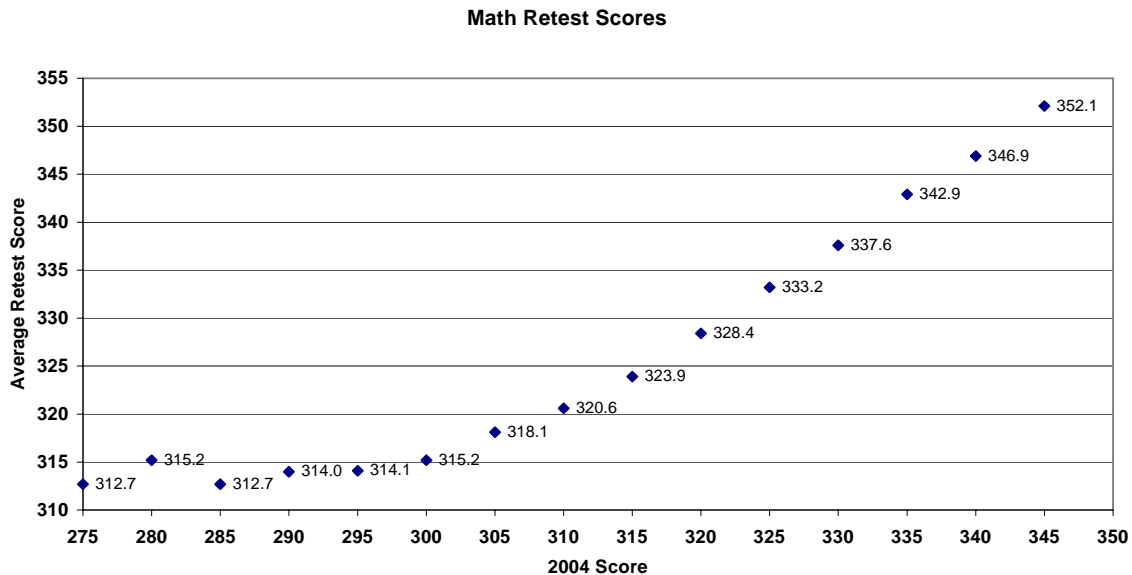
Not surprisingly, there is a clear relationship between their initial scores and their retest scores. One exception to this trend, however, was for students who initially scored below 300 on the mathematics test. These students had the same average retest scores, between 312 and 315, regardless of how far below 300 they had scored in 2004. The reason for this apparent anomaly is guessing. The mathematics test consists of 80 multiple-choice questions, each with 4 options. A student with no knowledge who randomly selects an option will, on average, answer 20 items correctly by chance alone. A number-correct score of 20 translates to a scale score of between 303 and 305. Students who score below this level do not really know less than nothing, they most likely simply had worse than average luck with their guesses. Thus, it is not really surprising that students who score at or below the chance level all do about the same on the retest. Note that previously the score scale extended down to 250, even though chance guessing resulted in an expected score of 300. The new score scale introduced in 2004 was shortened but did not entirely eliminate the range below chance. In the analyses that follow, we have adjusted all scores below chance back up to chance levels.



For ELA, the effects of random guessing are not as pronounced due to the inclusion of the essay. No amount of luck alone can raise a student's essay score above zero. Chance guessing on the multiple choice questions will lead to an average raw score of 18.5 points, which translates to a scale score between 281 and 285.



**Figure 3.3. Average ELA retest score by 2004 score level.**



**Figure 3.4. Average mathematics retest score by 2004 score level.**

Table 3.15 shows the average score gain and percentage of students passing for different demographic groups who retested as 11<sup>th</sup> graders in 2005. For all students, the average score gain was 11.6 in ELA and 8.3 in mathematics. The difference in score gains balanced out the difference in 2004 averages noted above (where there was a higher average for the mathematics test) so that the percentage passing was essentially the same. The average score gain, and correspondingly the percentage passing, varied by racial and ethnic group and was generally lower for students in special education programs. Only 28 percent of students in special education programs who retested passed the ELA and only 25.5 percent passed the mathematics test compared to 43.9 and 43.7 percent respectively overall.

**Table 3.15. Average Score Gains and Percentage Passing for 11<sup>th</sup> Graders Who Retested in 2005**

Group	ELA			Mathematics		
	Number	Average Gain	Percent Pass	Number	Average Gain	Percent Pass
All Students	85,210	14.2	42.9%	88,642	10.0	41.6%
Females	35,464	14.5	45.2%	43,463	9.5	42.3%
Males	49,665	14.0	41.3%	45,103	10.4	40.9%
2. Asian	5,434	16.9	49.4%	3,020	13.0	51.7%
5. Hispanic	52,190	13.4	39.8%	52,946	9.4	40.2%
6. African American	9,466	13.1	40.2%	11,888	8.1	34.0%
7. White (not Hispanic)	14,618	16.8	52.2%	17,042	12.2	48.8%
Economically Disadvantaged	53,788	13.3	39.2%	52,539	9.3	39.0%
English Learners	38,159	13.2	35.7%	31,373	9.2	37.3%
Special Education Students	22,851	11.1	27.4%	23,058	7.3	24.6%

A key question is how many students in the Class of 2006 have now passed both parts of the CAHSEE and completed the CAHSEE requirement for graduation. Unfortunately, it is difficult to answer this question with precision. We estimated that 175,216 11<sup>th</sup> graders participated in the 2004-05 CAHSEE testing. The actual number of individual students is somewhat smaller due to students taking the CAHSEE more than once at different schools and/or with differences in the coding of name and birth date. If we were unable to match the record from their second administration to the record for their first, we counted them twice.

The second difficulty in determining the number of students who completed the CAHSEE requirement was in matching 2004 10<sup>th</sup> grade results with 2004-05 11<sup>th</sup> grade results. A total of 48,732 11<sup>th</sup> grade records from the 2004-05 administrations could not be matched to any of the 2004 10<sup>th</sup> grade records. At the same time, 37,872 students who tested as 10<sup>th</sup> graders in 2004 and did not pass both parts were not matched to any of the 2004-05 CAHSEE records. In order to estimate the number of students completing the requirement by the end of 11<sup>th</sup> grade, we assumed that unmatched students who only took one part of the CAHSEE in the 11<sup>th</sup> grade had passed the other part in the 10<sup>th</sup> grade. Unmatched students who took both parts in the 11<sup>th</sup> grade were assumed not to have passed either part in 10<sup>th</sup> grade.

Perhaps more important than the number of students who have completed the requirement is the number of students who are still trying to complete the requirement, but have not yet done so. We know, approximately, how many 11<sup>th</sup> grade students were still trying to complete the CAHSEE during the 2004–05 school year. Again, problems in matching across administrations within the 2004–05 school year and problems matching to 10<sup>th</sup> grade records from the 2004 administrations limit the precision with which the number of students who have yet to complete the CAHSEE requirement can be estimated.

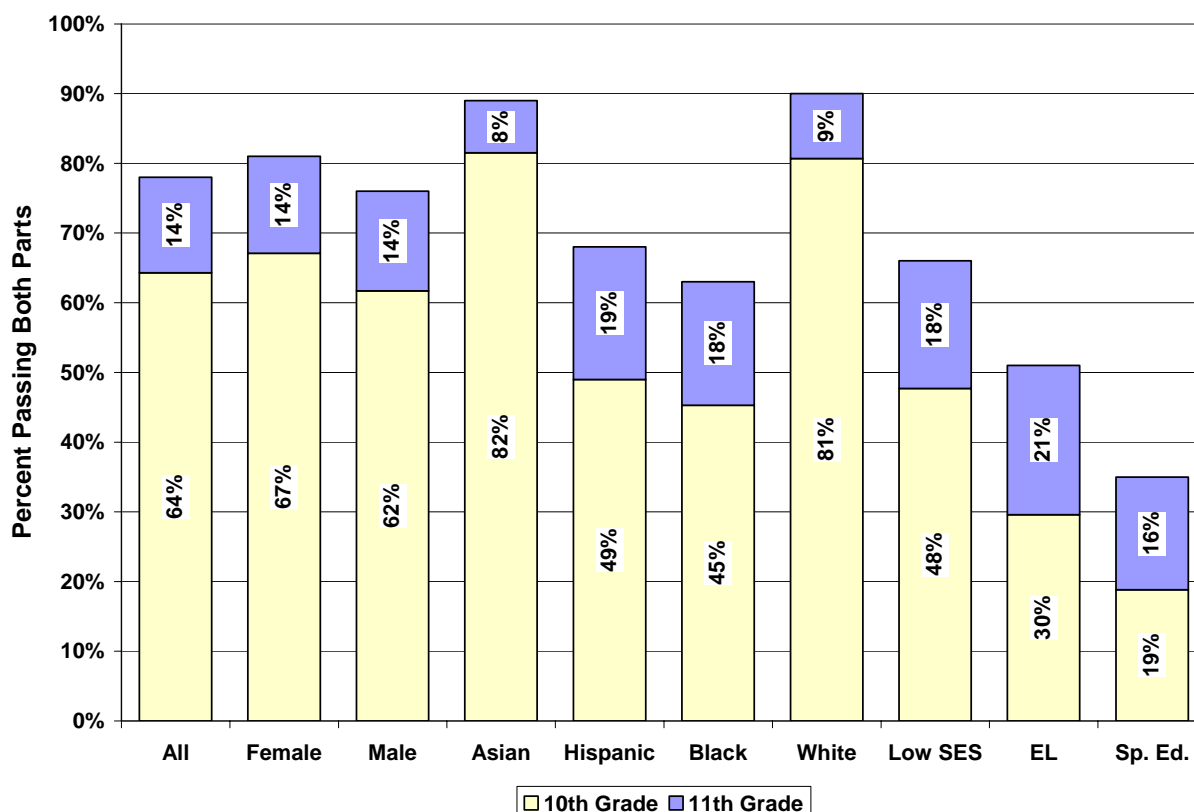
Table 3.16 gives our best estimates of the number and percentage of 11<sup>th</sup> grade students who passed both parts, one part, or neither part of the CAHSEE requirement by the end of the 2004–05 school year<sup>5</sup>. Figure 3.5 shows the increase in the cumulative passing rates from the end of 10<sup>th</sup> to the end of the 11<sup>th</sup> grade. There is likely a margin of error of about two percentage points in the estimates of the percentage of each group completing the CAHSEE requirement due to the matching issues noted above. As with the 10<sup>th</sup> grade results, completion rates for Hispanic, African American, economically disadvantaged, and English Learner students were considerably lower than the overall rate. The completion rate for students receiving special education services is, again, much lower still.

**Table 3.16. Estimated Passing Rates for Class of 2006 After 11<sup>th</sup> Grade**

Group	Passed Both		ELA Only		Math Only		Passed Neither	
	Number	%	Number	%	Number	%	Number	%
All Students	363,036	78%	28,863	6%	24,048	5%	47,026	10%
Females	183,086	81%	16,317	7%	8,818	4%	19,215	8%
Males	179,786	76%	12,543	5%	15,214	6%	27,798	12%
Asian	39,292	89%	659	1%	2,543	6%	1,515	3%
Hispanic	125,611	68%	15,759	8%	14,976	8%	29,626	16%
African American	23,784	63%	4,787	13%	1,896	5%	7,177	19%
White, non-Hispanic	152,571	90%	6,149	4%	3,568	2%	6,578	4%
Economically Disadvantaged	121,442	66%	15,406	8%	15,602	9%	30,627	17%
English Learner	41,815	51%	6,821	8%	13,082	16%	20,099	25%
Special Education	14,668	35%	5,176	13%	3,999	10%	17,492	42%

Notes: Passing rates are based on students who have passed in the 10<sup>th</sup> grade or who were still taking the exam as 11<sup>th</sup> graders in 2005. Estimates are only approximate because of difficulties in matching 10<sup>th</sup> and 11<sup>th</sup> grade results. Unmatched 11<sup>th</sup> graders who took only one of the two tests were assumed to have passed the other in 10<sup>th</sup> grade; those who took both tests were assumed to have passed neither in 10<sup>th</sup> grade.

<sup>5</sup> The total number of students in each demographic group who have passed the ELA may be obtained by adding the number shown in Table 3.16 who have passed both parts to the number who have passed the ELA only. The total number of students passing mathematics can be computed similarly.



**Figure 3.5. Percent Passing Both Parts of the CAHSEE in 10<sup>th</sup> and 11<sup>th</sup> Grade**

### ***School-Level Effects***

A key question that was debated before the state legislature this year was whether schools vary significantly in their effectiveness in preparing students to pass the CAHSEE. It is, of course, difficult to separate school-level effects of curriculum and instruction from effects associated with differences in the type and preparation of students served. In this section, we first examine differences in passing rates for targeted groups of students by the density of these students within the school. Then we turn to statistical models to examine student, school, and district differences in CAHSEE passing rates while controlling for other variables in each of the three levels.

#### ***Differences in School-Level Passing Rates***

Table 3.17 shows the percentage of schools with very low (0–50%), low (> 50–75%), moderate (>75–90%), and high (> 90%) ELA passing rates for schools with different concentrations of minority or at-risk students. Passing rates were not computed for schools with fewer than 10 students in the targeted group and these schools were excluded. Table 3.18 shows the equivalent results for mathematics. With the possible exception of ELA passing rates for English Learners, at-risk students in schools with high concentrations of at-risk students are far less likely to pass the CAHSEE.

**Table 3.17. 2005 10<sup>th</sup> Grade ELA Passing Rates for Schools with Different Concentrations of Minority or At-risk Students**

School Category	Number of Schools	Percent of Schools at Each Passing Level			
		Very Low (0–50%)	Low (>50–75%)	Moderate (>75–90%)	High (> 90%)
Passing Rates for All Students					
All Schools	2335	37.0%	27.4%	23.0%	12.6%
Passing Rates for Hispanic Students					
Low Hispanic (0–20%)	268	4.5%	34.0%	45.1%	16.4%
Moderate Hispanic (>20–60%)	674	27.9%	54.5%	15.7%	1.9%
High Hispanic (> 60%)	395	44.6%	50.6%	3.3%	1.5%
Passing Rate for African American Students					
Low African Amer. (0–4%)	161	5.6%	39.1%	34.2%	21.1%
Moderate African Amer. (>4–12%)	241	9.5%	58.5%	26.1%	5.8%
High African Amer. (> 12%)	338	42.0%	41.4%	12.7%	3.9%
Passing Rate for Economically Disadvantaged Students					
Low Economically Disadvantaged (0–20%)	235	6.4%	58.7%	29.8%	5.1%
Moderate Economically Disadvantaged (>20–60%)	670	24.5%	59.3%	12.7%	3.6%
High Economically Disadvantaged (> 60%)	523	50.7%	41.5%	6.1%	1.7%
Passing Rate for English Learners					
Low EL (0–10%)	239	64.4%	30.5%	4.6%	0.4%
Moderate EL (>10–33%)	447	80.8%	17.2%	1.1%	0.9%
High EL (> 33%)	234	77.4%	19.7%	1.3%	1.7%
Passing Rate for Students Receiving Special Education Services					
Low SD (0–8%)	282	75.2%	20.9%	3.2%	0.7%
Moderate SD (>8–12%)	432	82.4%	15.1%	2.5%	0.0%
High SD (>12%)	221	92.3%	6.8%	0.9%	0.0%

**Table 3.18. 2005 10<sup>th</sup> Grade Mathematics Passing Rates for Schools with Different Concentrations of Minority or At-risk Students**

School Category	Number of Schools	Percent of Schools at Each Passing Level			
		Very Low (0–50%)	Low (>50–75%)	Moderate (>75–90%)	High (> 90%)
Passing Rates for All Students					
All Schools	2335	45.1%	25.5%	20.0%	9.4%
Passing Rates for Hispanic Students					
Low Hispanic (0–20%)	268	8.6%	36.2%	44.0%	11.2%
Moderate Hispanic (>20–60%)	674	36.5%	48.7%	13.6%	1.2%
High Hispanic (> 60%)	395	51.1%	42.8%	5.1%	1.0%
Passing Rate for African American Students					
Low African Amer. (0–4%)	161	14.3%	46.0%	28.6%	11.2%
Moderate African Amer. (>4–12%)	241	24.9%	56.9%	17.0%	1.2%
High African Amer. (> 12%)	338	61.5%	30.5%	6.8%	1.2%
Passing Rate for Economically Disadvantaged Students					
Low Economically Disadvantaged (0–20%)	235	7.2%	58.3%	28.9%	5.5%
Moderate Economically Disadvantaged (>20–60%)	670	30.9%	54.3%	12.8%	1.9%
High Economically Disadvantaged (> 60%)	523	58.1%	33.6%	6.3%	1.9%
Passing Rate for English Learners					
Low EL (0–10%)	239	43.1%	40.2%	12.6%	4.1%
Moderate EL (>10–33%)	447	64.9%	29.3%	4.7%	1.1%
High EL (> 33%)	234	67.1%	28.2%	4.3%	0.4%
Passing Rate for Students Receiving Special Education Services					
Low SD (0–8%)	282	79.4%	17.7%	2.5%	0.4%
Moderate SD (>8–12%)	432	84.7%	13.4%	1.9%	0.0%
High SD (>12%)	221	96.4%	3.2%	0.5%	0.0%

As a result of the Williams Case (Williams v. California), about 2,000 low-performing schools are being monitored, including just over 300 high schools. The schools being monitored were in the lowest three deciles (essentially below the 30th percentile) on the 2003 Academic Performance Index (API). Table 3.19 shows how these low-performing schools compared to all other schools in terms of CAHSEE passing rates for different groups of students. Differences at the low end were not consistent. In some cases a greater proportion of the non-Williams schools were in the very low passing rate category. At the top end, however, the Williams schools were consistently less likely to have moderate to high passing rates for each of the student groups analyzed.



**Table 3.19. 2005 10<sup>th</sup> Grade Passing Rates for Low-Performing Schools**

Student Category	School Type	Percent of Schools at Each Passing Level			
		Very Low (0-50%)	Low (>50-75%)	Moderate (>75-90%)	High (> 90%)
English Language Arts					
All Students	Williams	18.1%	70.3%	11.0%	0.6%
	Other	40.2%	20.5%	24.9%	14.6%
Hispanic Students	Williams	23.9%	70.4%	4.1%	1.6%
	Other	45.2%	30.1%	13.7%	13.0%
African American Students	Williams	34.1%	49.5%	7.3%	9.1%
	Other	40.0%	23.0%	14.8%	22.2%
Economically Disadvantaged	Williams	25.2%	68.9%	3.4%	2.5%
	Other	45.4%	34.7%	10.9%	9.0%
English Learners	Williams	82.8%	15.5%	0.7%	1.0%
	Other	76.2%	15.5%	1.9%	6.4%
Students with Disabilities	Williams	97.4%	1.3%	0.0%	1.3%
	Other	79.6%	11.8%	2.0%	6.6%
Mathematics					
All Students	Williams	28.2%	65.0%	6.8%	0.0%
	Other	47.9%	19.1%	22.2%	10.8%
Hispanic Students	Williams	36.2%	58.2%	5.0%	0.6%
	Other	51.3%	26.6%	13.3%	8.8%
African American Students	Williams	59.6%	31.0%	2.4%	7.0%
	Other	49.8%	24.0%	11.1%	15.1%
Economically Disadvantaged	Williams	33.8%	61.9%	3.1%	1.2%
	Other	52.6%	30.0%	10.6%	6.8%
English Learners	Williams	72.1%	22.8%	1.7%	3.4%
	Other	65.2%	21.8%	5.4%	7.5%
Students with Disabilities	Williams	97.4%	1.3%	0.0%	1.3%
	Other	79.6%	11.8%	2.0%	6.6%

Note. The Williams case involved tracking the lowest-performing schools. The schools being monitored were those in the lowest three deciles based on 2003 Academic Performance Index (API) values. This table compares CAHSEE results for 326 Williams high schools and 2009 other high schools (essentially the top seven deciles).

### ***Models of School and District Effects***

Heretofore it has been very difficult to distinguish the effectiveness of the school from the background and preparation of the students served by the school. Schools whose students score well on the CAHSEE (or any other assessment) may simply be serving students with family backgrounds or other attributes that have prepared them to succeed. While it is possible to match schools on the basic demographics of the students served, it is almost certain that differences in unmeasured background characteristics will confound such comparisons.

With the 2005 results for 11<sup>th</sup> graders, analyses of school-level effects are more tenable. The availability of scores from the 2004 assessment allow us to examine school differences in helping students who do not initially pass the CAHSEE while adjusting for differences in the initial student scores. Differences in initial 10<sup>th</sup> grade passing rates may be attributable more to the effectiveness of student's elementary and middle schools. Differences in gains from 10<sup>th</sup> to 11<sup>th</sup> grade are entirely attributable to the high schools.

Our 2005 Evaluation Report (Wise, et al., 2005) reported analyses using hierarchical linear models (HLM) in which variables related to student scores are included at the student, school, and district levels. The models examine variation in student scores within schools, across schools within a district, and across districts. At each level, explanatory (predictor) variables are examined to determine the extent to which variation in scores is related to each explanatory variable, after effects of the other variables are controlled. A complete description of the variables examined and the findings from these analyses is provided in Wise et al., (2005). Key findings are summarized here.

The first key finding was that student gains varied considerably within each school. For both ELA and mathematics, roughly 96 percent of the variation in gains in student scores was within school; differences in school averages accounted for only 4 percent of the variation in gains. Student-level variables were the strongest predictors of student gains, as shown by the demographic differences in gain scores in Table 3.15 above. The idea that there are very good schools where all students gain and very poor schools where no students gain is not supported by our analyses. There might, however, be very effective and very ineffective programs within the same school, but we do not have data that would permit program or course level analyses.

Even though differences across schools in average gains were small, there were a few school-level variables that were significantly related to average student gains. One was school type. Students at regular public high schools had average gains that were 2 to 3 points higher than students in continuation schools or schools serving other special populations. Second, consistent with the results shown in Tables 3.17 and 3.18 above, students in schools with high concentrations of minority students had average gains about 2 points lower than students in other schools.

Only one variable was found to be a significant predictor of district-level differences. The average salary of certificated teachers was a significant predictor of gains in ELA, but not in mathematics. An increase of \$1,000 in certificated salaries per student (based on average daily attendance) corresponds to an increase of 2 points in average score gain on the CAHSEE ELA test.

While somewhat exploratory in nature, the analyses of schools effects provides some context for interpreting claims about school effectiveness in helping students who do not initially pass the CAHSEE. Additional analyses will be included in our 2006 Evaluation Report, when 12<sup>th</sup> grade test results for the Class of 2006 become available.

### ***Summary of Findings***

Results from the three CAHSEE administrations during the 2004–05 school year were analyzed separately for 10<sup>th</sup> grade students in the high school Class of 2007 and 11<sup>th</sup> grade students in the High School Class of 2006. The results for 10<sup>th</sup> graders were very similar to last year's results for 10<sup>th</sup> graders in the Class of 2006. Passing rates improved slightly for the ELA exam and were about the same for the mathematics exam. Passing rates for different demographic groups were also largely unchanged. Students receiving special education services continued to have considerably more difficulty in passing the CAHSEE compared to all other groups of students.

Students in the Class of 2006 who retested as 11<sup>th</sup> graders showed improvement in their scores. About half of those taking each part had passed that part by the end of the 11<sup>th</sup> grade. Conversely, about half of those retested members of the Class of 2006 still have not passed. In addition, some unknown, but possibly large number of students who did not pass in 2004 appears not to have retested in 2005. As noted above in Table 3.4, we could not find 2005 test records for 44,978 students (about 10 percent of all 2004 10<sup>th</sup> graders) who tested, but did not pass in 2004. Some of these students likely did test in 2005, but with identifiers that did not permit matching to their 10<sup>th</sup> grade results. Others have left school or been retained in 10<sup>th</sup> grade, although no good counts are available for these conditions.

In addition to analyzing the results, we examined factors relating to test accuracy, including a review of test equating procedures, the raw-to-scale score conversion tables, and analyses of the consistency with which the essays were scored. No significant issues were noted in any of these procedures.

Finally, we examined school differences in helping students who did not initially pass the CAHSEE. Differences among schools in the gain scores of students who retested as 11<sup>th</sup> graders were modest. Overall, gains were slightly lower for continuation schools and for schools with high concentrations of minority students.